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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

POPHAM, JEFFREY D

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/931,069

Applicant(s)

GILBERT ET AL.

Examiner

Jeffrey D. Popham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-20 and 26-46 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 18-20 and 26-46 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Remarks

Claims 18-20 and 26-46 are pending.

Claim Objections

1. Claim 39 is objected to because it contains the limitation "the identification codes of the master de-identified records". There is insufficient antecedent basis for this limitation in the claims. For purposes of prior art rejection, claim 39 has been construed as being dependent upon claim 38.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18-20, 37-39, 41-44, and 46 are rejected under 35 U.S.C. 102(e) as being anticipated by Zubeldia (U.S. Patent 6,397,224).

Regarding Claim 18,

Zubeldia discloses a method for linkage of de-identified records,
comprising:

Obtaining client de-identified records, the client de-identified records comprising field-level encrypted match codes (Column 5, line 49 to Column 6, line 12);

Providing a database of master de-identified records, the master de-identified records comprising field-level encrypted match codes (Column 6, lines 54-65);

Comparing the match codes of the client de-identified records and the master de-identified records (Column 6, line 66 to Column 7, line 16; and Column 7, line 64 to Column 8, line 6); and

Linking at least a portion of the client de-identified records with the master de-identified records using comparison of the match codes (Column 6, line 66 to Column 7, line 16; and Column 7, line 64 to Column 8, line 6).

Regarding Claim 37,

Claim 37 is a system claim that corresponds to method claim 18 and is rejected for the same reasons.

Regarding Claim 41,

Claim 41 is a method claim that is broader than method claim 18 and is rejected for the same reasons.

Regarding Claim 44,

Claim 44 is a method claim that corresponds to method claim 18 and is rejected for the same reasons.

Regarding Claim 19,

Zubeldia discloses assigning identification codes to the master de-identified records (Column 6, lines 54-65).

Regarding Claim 38,

Claim 38 is a system claim that corresponds to method claim 19 and is rejected for the same reasons.

Regarding Claim 42,

Claim 42 is a method claim that is broader than method claim 19 and is rejected for the same reasons.

Regarding Claim 20,

Zubeldia discloses appending the identification codes of the master de-identified records to the client de-identified records (Column 7, lines 28-38).

Regarding Claim 39,

Claim 39 is a system claim that corresponds to method claim 20 and is rejected for the same reasons.

Regarding Claim 43,

Claim 43 is a method claim that is broader than method claim 20 and is rejected for the same reasons.

Regarding Claim 46,

Claim 46 is a method claim that is broader than method claim 20 and is rejected for the same reasons.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia in view of Gasch (Gasch, "0.2.7.5 One-way hashing", 7/9/1999, pp. 1-8, obtained from <http://www.fearme.com/misc/alg/node33.html>).

Zubeldia does not disclose encoding records with a seed value to provide seed value identifiers.

Gasch, however, discloses encoding records with a seed value to provide seed value identifiers (Page 1). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the one-way hashing technique of Gasch into the anonymous linking system of Zubeldia in order to minimize the number of collisions within the system, so that two entities will have a lower chance of having the same match code.

4. Claims 26 and 28-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia in view of Halamka (Halamka et al., "Managing Care in an Integrated

Delivery System via an Intranet", 1998, pp. 1-5, obtained from
<http://www.amia.org/pubs/symposia/D004881.PDF>).

Regarding Claim 26,

Zubeldia discloses a system that links de-identified records,
comprising:

Obtaining client de-identified records, wherein the client de-identified records comprise first field-level encrypted match codes (Column 5, line 49 to Column 6, line 12); and

A database that stores a plurality of master de-identified records, wherein the master de-identified records comprise second field-level encrypted match codes (Column 6, lines 54-65);

Wherein the computer is adapted to compare the first field-level encrypted match codes and the second field-level encrypted match codes and link at least a portion of the client de-identified records with the master de-identified records based on a comparison of the first field-level encrypted match codes and the second field-level encrypted match codes (Column 6, line 66 to Column 7, line 16; and Column 7, line 64 to Column 8, line 6).

Zubeldia does not disclose that this is performed on a server computer.

Halamka, however, discloses linking of de-identified records on a server computer (Page 1, Data Sources section). It would have been

obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the health care server of Halamka into the anonymous linking system of Zubeldia in order to ensure that all information held within the server is held securely, only allowing those with access roles of the correct level to access the medical information (Pages 4-5, SECURITY AND CONFIDENTIALITY section).

Regarding Claim 30,

Claim 30 is a system claim that is broader than system claim 26 and is rejected for the same reasons.

Regarding Claim 32,

Claim 32 is a system claim that is broader than system claim 26 and is rejected for the same reasons.

Regarding Claim 34,

Claim 34 is a system claim that is broader than system claim 26 and is rejected for the same reasons.

Regarding Claim 28,

Zubeldia discloses a table used to facilitate a link of the at least a portion of the client de-identified records with the aster de-identified records (Column 6, lines 54-65).

Regarding Claim 31,

Claim 31 is a system claim that is broader than system claim 28 and is rejected for the same reasons.

Regarding Claim 29,

Halamka discloses that the server computer comprises a communication interface used to receive the client de-identified records from one or more client computers (Page 1, data Sources section).

Regarding Claim 33,

Claim 33 is a system claim that is broader than system claim 29 and is rejected for the same reasons.

Regarding Claim 35,

Zubeldia discloses that the master de-identified records comprise assigned identification codes (Column 6, lines 54-65).

Regarding Claim 36,

Zubeldia discloses that the server is further configured to append the assigned identification codes to the client de-identified record (Column 7, lines 28-38).

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia in view of Halamka, further in view of Garvin (Garvin et al., "Ensuring Statewide Newborn Screening by Linking the New Jersey's Electronic Birth Certificate and Newborn Screening Databases", 12/1/1998, pp. 1-2, obtained from <http://www.uic.edu/sph/dataskills/liveconf/slideshows/IID1/IID11/>).

Zubeldia does not disclose probabilistically linking at least a portion of the client records with the master records.

Garvin, however, discloses probabilistically linking at least a portion of the client records with the master records (Page 2). It would have been obvious to incorporate the probabilistic linking methods of Garvin into the anonymous linking system of Zubeldia in order to obtain higher confidence in validity and quality of matches over deterministic matching and to allow the system to handle data entry errors.

6. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zubeldia in view of Garvin.

Zubeldia does not disclose that linking at least a portion of the client records with the master records comprises probabilistically linking at least a portion of the client records with the master records.

Garvin, however, discloses that linking at least a portion of the records with the master records comprises probabilistically linking the at least a portion of the records with the master records (Page 2). It would have been obvious to incorporate the probabilistic linking methods of Garvin into the anonymous linking system of Zubeldia in order to obtain higher confidence in validity and quality of matches over deterministic matching and to allow the system to handle data entry errors.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey D. Popham whose telephone number is (571)-272-7215. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571)272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Matthew D. Smithers
MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137